

The University of Missouri-Columbia

BULLETIN

College of
Veterinary Medicine



November 23, 1977

UNIVERSITY OF MISSOURI-COLUMBIA

Calendars for 1977-78 and 1978-79

First Semester

New Student Orientation and Registration
 Registration
 Classwork begins, 7:40 a.m.
 Labor Day
 Thanksgiving Recess begins, 12:30 p.m.
 Classwork resumes, 7:40 a.m.
 Classwork First Semester ends, 5:30 p.m.
 Stop Day
 Final Examinations begin
 First Semester closes, 5:00 p.m.

Second Semester

New Student Orientation
 Registration
 Classwork begins, 7:40 a.m.
 Spring Recess begins, 12:30 p.m.
 Classwork resumes, 7:40 a.m.
 Classwork Second Semester ends, 5:30 p.m.
 Stop Day
 Final Examinations begin
 Second Semester closes, 5:30 p.m.
 Annual Commencement

Summer Session

Eight-Week Session

Registration and Orientation
 Classwork begins, 7:30 a.m.
 Independence Day Recess
 Summer Session closes, 5:00 p.m.
 Summer Commencement

Four-Week Session I

Registration and Orientation
 Classwork begins, 7:30 a.m.
 Independence Day Recess
 Session I closes, 5:00 p.m.

Four-Week Session II

Registration
 Classwork begins, 7:30 a.m.
 Session II closes, 5:00 p.m.
 Summer Commencement

1977

Mon., Aug. 22
 Tues., Aug. 23
 Wed., Aug. 24
 Mon., Sept. 5
 Wed., Nov. 23
 Mon., Nov. 28
 Thurs., Dec. 8
 Fri., Dec. 9
 Sat., Dec. 10
 Sat., Dec. 17

1978

Thurs., Jan. 12
 Fri., Jan. 13
 Mon., Jan. 16
 Sat., March 25
 Mon., April 3
 Wed., May 3
 Thurs., May 4
 Fri., May 5
 Fri., May 12
 Sat., May 13

1978

Mon., Aug. 21
 Tues., Aug. 22
 Wed., Aug. 23
 Mon., Sept. 4
 Tues., Nov. 21
 Mon., Nov. 27
 Thurs., Dec. 7
 Fri., Dec. 8
 Sat., Dec. 9
 Sat., Dec. 16

1979

Thurs., Jan. 11
 Fri., Jan. 12
 Mon., Jan. 15
 Sat., March 24
 Mon., April 2
 Wed., May 2
 Thurs., May 3
 Fri., May 4
 Fri., May 11
 Sat., May 12

Mon., June 12
 Tues., June 13
 Tues., July 4
 Fri., Aug. 4
 Fri., Aug. 4

Mon., June 11
 Tues., June 12
 Wed., July 4
 Fri., Aug. 3
 Fri., Aug. 3

Mon., June 12
 Tues., June 13
 Tues., July 4
 Fri., July 7

Mon., June 11
 Tues., June 12
 Wed., July 4
 Fri., July 6

Mon., July 10
 Tues., July 11
 Fri., Aug. 4
 Fri., Aug. 4

Mon., July 9
 Tues., July 10
 Fri., Aug. 3
 Fri., Aug. 3

BULLETIN

UNIVERSITY OF MISSOURI-COLUMBIA

Volume 78

Number 25

November 23, 1977

General 1977 Series

Number 25

Robert E. Kren, *Director*, Office of Public Information
 Louise H. Stephens, *Editor*

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Announcement of the



College of Veterinary Medicine

UNIVERSITY OF MISSOURI-COLUMBIA
1977-78

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Compiled in the Office of the Dean, College of Veterinary Medicine.

UMC Administration

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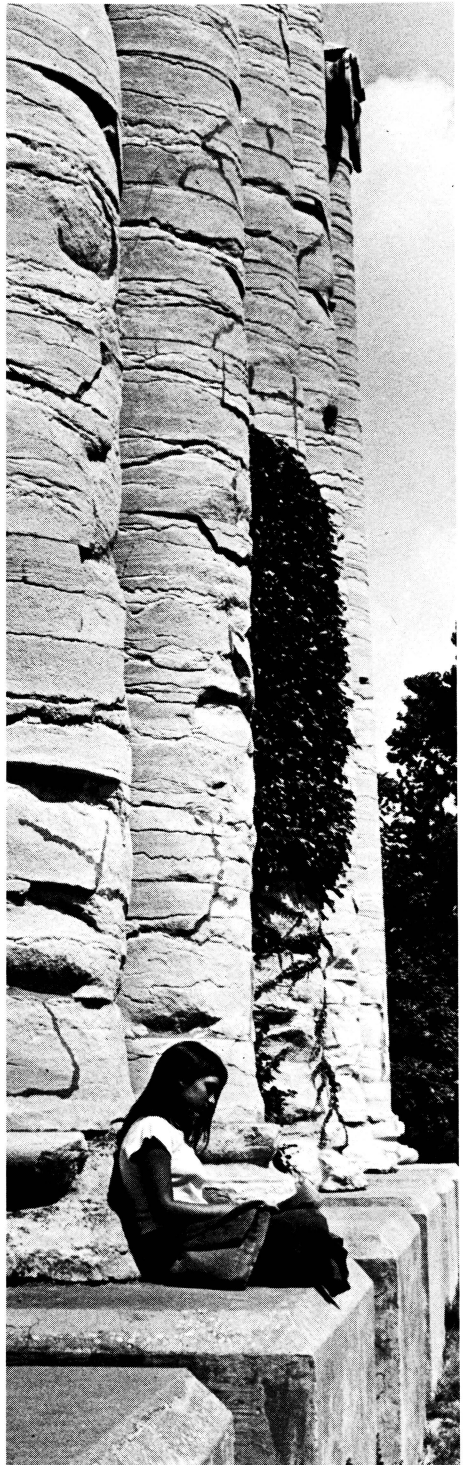
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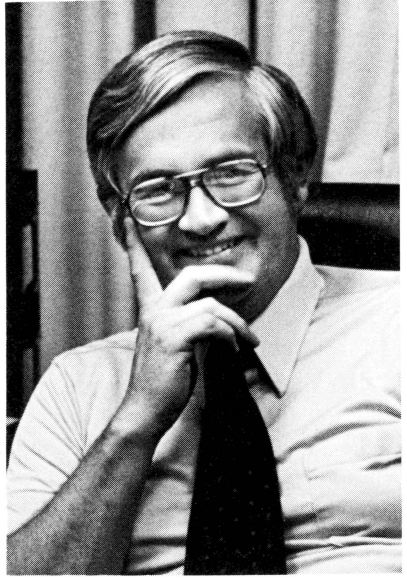
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INTRODUCTION

Veterinary Medicine is as old as recorded history. Today, more than ever before, it is a principal member of the health professions serving mankind throughout the world in an amazing array of responsibilities.

Veterinary Medicine is a science and an art which applies the principles of biomedical sciences to problems of health and disease in animals, thereby contributing to the well-being of animals, the prevention and control of diseases transmissible from animals to man, and discovery of newer knowledge in the diagnosis, treatment, and the control of disease of both man and animals.

Veterinary Medicine at the University of Missouri dates back to 1884; the present College of Veterinary Medicine graduated its first class in 1950. This bulletin outlines today's multiple dimensions of Veterinary Medicine and presents the sequence of learning culminating in the degree, Doctor of Veterinary Medicine.

We hope you will find the enclosed information useful in understanding Veterinary Medical education at the University of Missouri-Columbia. If there are unanswered questions, please call or write our office.

Kenneth D. Weide, D.V.M., Ph.D.
Dean
College of Veterinary Medicine

CAREERS IN VETERINARY MEDICINE

A profession devoted to the service of man and animal, veterinary medicine offers a wide range of career specialties. Individual preference is the main limitation in choosing a career in Veterinary Medicine.

There are more than 30,000 veterinarians in the United States with about 72 per cent engaged in private practice. About 9 per cent are involved in government work such as Public Health Service, military, or various positions at local, state, and federal levels. Over 10 per cent of the veterinarians have found a profitable vocation in commercial fields such as the feed and drug industries. Academic institutions claim nearly 10 per cent of the veterinarians where they teach and/or conduct research.

The virtual explosion in numbers of small animal practitioners in the past decade indicates that veterinary medicine today is important in urban areas, as well as the rural areas of the country. The great increase of veterinarians working in special fields reflects the profession's strength and versatility in new areas such as space exploration and biomedical studies that require the highest degree of specialized knowledge and sophisticated skills.

Veterinary Practice

Private practice attracts the largest percentage of veterinarians. Along with the growth of the entire profession, various kinds of practices have evolved. Practices are owned by individuals or groups of veterinarians and range from mixed to highly selective speciality operations.

1. Large Animal Practice

This type of practice is concerned with the nutrition, management, and disease problems of horses, cattle, sheep, and swine. The large animal veterinarian is in the forefront of the struggle to protect food animals from disease and thus assure an adequate animal protein supply for our nation.

2. Small Animal Practice

These veterinarians are concerned with the health, care and management of dogs, cats,

and other small pets. The modern small animal clinic or hospital is well-equipped with surgical units and clinical laboratories necessary for the diagnosis and treatment of the problems of household pets.

3. Mixed Practice

This type of practice is concerned with both large and small animals. The practices are often staffed by more than one veterinarian, so that each may concentrate in certain areas.

4. Specialty Practice

Specialty practices concentrate their services on one animal species or on one discipline. These include specialties in bovine, equine, avian and exotic or zoo animal medicine, and specialty disciplines such as ophthalmology, radiology, or nutrition.

5. Laboratory Animal Medicine

Veterinarians working in this area direct their efforts toward the management of laboratory animals used for biomedical teaching and research. They are responsible for the health of species varying from pigeons to miniature swine. Others may use animals for drug testing, disease study, or investigating basic biological phenomena.

6. Space and Marine Biology

The number of veterinarians employed in these fields is somewhat limited, but the veterinarian will become more important as space travel and the use of marine plants and animals for food sources increase.

Government

Increasing numbers of veterinarians are being hired by municipal, state, national, and international agencies with the federal government as the leading employer.

1. Municipal Government

Many municipal health departments employ veterinarians either full or part time. Services are rendered in food inspection, communicable disease prevention and control, epidemiological studies, laboratory diagnosis, and research.

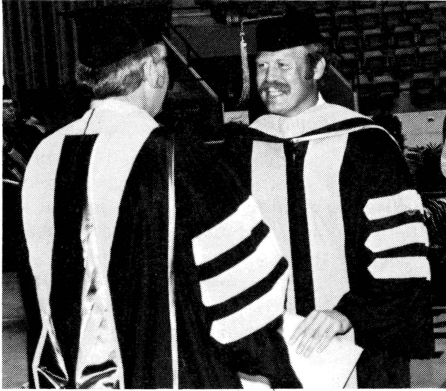
2. State Employment

The state veterinarian and livestock sanitary officials enforce laws and regulations in each state to safeguard the health of animals and humans. Many state health departments have one or more veterinarians on their staffs to help control animal diseases significant to human health and to investigate outbreaks of such diseases.

3. National Agencies

a. U.S. Department of Agriculture

Veterinarians employed by the Department of Agriculture are primarily con-



Culminating four years of professional veterinary education.

cerned with the production of healthy livestock and poultry. They are responsible for assuring wholesome and accurately labeled food products of animal origin for the nation's consumers. Certain sections within the Department of Agriculture contribute to the health and economy of the nation by protecting the nation's livestock from foreign diseases and eradicating or controlling diseases within the country. Others are involved in evaluation of biological products to insure their effectiveness.

b. Food and Drug Administration

The Food and Drug Administration has a veterinary medical branch which supervises the production, manufacture, and marketing of veterinary drugs and medicated animal feeds.

c. Public Health Service

Veterinarians pursuing a career in the Public Health Service are often commissioned officers. They work with other members of the health professions to protect the health of animals and man. Many of these veterinarians conduct epidemiological studies to investigate diseases of animals transmissible to man.

d. Armed Forces

Military veterinarians serve mainly in the areas of public health, research, laboratory animal medicine and canine medicine. Those concerned with public health are responsible for the general sanitation and cleanliness of U.S. military bases. They assure the quality of foodstuffs for military use. Those serving in a research capacity may be involved in projects related to aerospace exploration, nuclear medicine, laboratory animal medicine, or marine biology. Veterinarians also

supervise the health of dogs used for military purposes.

e. International Agencies

Veterinarians have helped improve the food supplies in many underdeveloped countries, thus raising the local standards of living. Opportunities for foreign service are based on one- to two-year contracts or appointments. Such positions are available through universities, foundations, or specialized agencies of the United Nations. A few veterinarians also are employed directly by foreign countries, private firms, or individuals on a consultant basis.

Commercial

The veterinarian's role in industry has expanded to include practically all of the knowledge, skill, and special talents within the profession. As the industries serving the medical field and livestock industry expand, the need for veterinarians also increases.

1. Drug and Pharmaceutical Industry

Varied services are performed by veterinarians in the drug industry. They serve as integral parts of a team whose responsibilities are essential in developing, manufacturing, and marketing drugs and diagnostic products.

2. Feed Industry

Many veterinarians are currently working with feed companies to provide better nutrition for the livestock of the country by scientific use of balanced rations. As the inter-relationship of nutrition and disease is more clearly understood, more veterinarians will be needed to work with nutritionists in formulating satisfactory diets.

3. Herd Management and Food Production

Some veterinarians are employed by large commercial feedlots and corporate farms to improve the nutrition and health of thousands of cattle and swine.

4. Recreation

Veterinarians are in demand in the areas of dog and horse racing. Official track veterinarians check for drug use as well as supervising the care of animals at the tracks. They are also needed at organized shows, trail rides, and dog trials as well as acting as advisors at breeding facilities.

Academia

The area of education is one of the most important in the profession and qualified

educators are in constant demand. Individuals in this area usually obtain graduate degrees, or complete a residency program, in addition to the Doctor of Veterinary Medicine degree in order to gain experience in teaching and more knowledge in a particular discipline. Veterinary educators have the responsibility of producing veterinarians who are trained scientists as well as educated citizens.

Most veterinarians employed by universities are active in both teaching and biomedical research. The instructor's role is to impart to students a sound scientific base from which they can effectively fill their chosen roles in society. This is accomplished through lectures, laboratory exercises, seminars, informal discussions, and actual clinical experience. Supported by private concerns as well as by government agencies, research provides an opportunity to delve intimately into one's specific field of interest. Information gained by the investigators in their research programs serves to improve the effectiveness of teaching.

HISTORY OF VETERINARY MEDICINE AT UMC

Veterinary medicine at the University of Missouri began in 1884 and by 1976 has progressed through five stages—a course in veterinary science, a department of veterinary science, a School of Veterinary Medicine in the Division of Agricultural Sciences, a School of Veterinary Medicine as a separate division of UMC, and finally, a College of Veterinary Medicine.

In 1885, the first vaccine-virus laboratory in the United States was established at the University under the supervision of the Veterinary Science Department. A veterinary laboratory building was erected in 1887. During these early years the staff veterinarians taught some courses to medical and agricultural students, conducted research on tick fever, and investigated livestock losses from disease in various parts of the state.

Connaway Hall was built in 1910-11 to help house the expanding teaching pro-

gram. Faculty members of the Department of Veterinary Science taught courses to agricultural students, investigated animal and poultry diseases, and performed diagnostic and extension work. Hog cholera virus and anti-hog cholera serum were produced from 1915 to 1936.

Classes in the School of Veterinary Medicine had been limited to 30 students from the opening of the School in 1946. Those admitted were residents of Missouri. However, in 1965 the number was doubled with some out-of-state residents being accepted to meet the increased demand for veterinarians. In 1970, the class size was increased to 72 students. This increased enrollment was made possible with additional faculty members and improved facilities. In 1961 the Teaching Hospital was completed. Phase One of a building program was completed in 1977, providing an excellent facility for teaching, service, diagnostic work, and research. Coupled with the increased size of the student body has been a balanced expansion of graduate training and research programs.

A total of 1,067 veterinarians have been graduated from the College of Veterinary Medicine since 1946. At present, 72 students are admitted to each class.

ADMISSION PROCEDURES AND REQUIREMENTS

There are no fixed requirements for the high school curriculum as preparation for the preprofessional course work. However, the student is wise to concentrate in three areas:

1. Mathematics—a good understanding and working knowledge of math is usually considered essential for success in quantitative sciences such as chemistry and physics;
2. English and communication skills—the abilities to read, write, and communicate verbally are absolutely essential for a professional career;
3. Some exposure to science, especially biology, to see if the subject matter is appealing.

Actually, veterinary medicine may be considered an applied form of biological science. Therefore, it is advisable that

a student take four years of math, four years of English, two years of biology, and as much chemistry and physics as is possible.

A minimum of two years of pre-professional study is required before a student may be admitted to the professional program leading to the Doctor of Veterinary Medicine (D.V.M.) degree at the UMC College of Veterinary Medicine. Preprofessional requirements may be completed at any accredited college or university where the course work is offered.

Students interested in completing the preprofessional requirements at UMC should address inquiries to the Office of Admissions, 130 Jesse Hall, Columbia, Mo. 65201.

Admittance into the professional curriculum depends upon the approval of the Committee on Admissions and Scholarship for the College of Veterinary Medicine.

Students must complete at least 64 semester hours of college work by the end of the winter semester (spring quarter) of the year in which admission is sought. However, very few students are admitted with only the minimum number of credits (average of those admitted is usually over 100 semester hours). Therefore, students are encouraged to take concurrent course work which will satisfy a major at the bachelor's degree level. Since only 72 students are admitted each year into the veterinary curriculum, they are encouraged to pursue bachelor's degrees in areas in which they would like to work if they are not accepted into veterinary college.

A Missouri resident must have attained an accumulative grade point average of 2.5 (A=4.0) or better during preprofessional work in order to have application accepted. While the minimum requirements for admission may be completed in two years of study, students admitted with only two years of preprofessional work are usually those with exceptionally good scholastic achievement records and aptitude scores.

No specific preprofessional curriculum is arranged by the College of Veterinary Medicine, but each student's program must include 50 semester hours of college credit in the following subject areas:

English or courses in Communication Skills (speech, technical writing, etc.)*	6
College Algebra or more advanced mathematics	3
Inorganic Chemistry	8
Organic Chemistry	8
Physics	5
Biological Science	10
Social Science and/or Humanistic Studies	10

*Credit gained by examination is accepted in lieu of formal course credit.

Students may want to elect additional supporting courses in biochemistry, animal nutrition, genetics, developmental biology or embryology, comparative anatomy, and microbiology. Courses in business procedures and accounting may also be helpful.

Individuals applying after August, 1980 will need to meet the following requirements.

PREPROFESSIONAL CURRICULUM FOR VETERINARY MEDICINE

Students should incorporate the pre-professional curriculum into a degree program other than veterinary medicine, since only a limited number of applicants can be admitted into the College of Veterinary Medicine.

The following courses and credit hours must be taken in residence at an accredited institution of higher learning to qualify for admission to the College of Veterinary Medicine.

	<i>Hours</i>
English or Communication	6
College Algebra	3
Inorganic Chemistry	8
Organic Chemistry	8
Physics	5
Biological Science	10
Social Science and/or Humanistic Studies	10
Electives	14
Total	64

The following UMC course numbers (or equivalent courses at other accredited colleges or universities) must be taken in

residence to satisfy requirements for admission into the College of Veterinary Medicine. If a student has credit by examination a more advanced course must be taken in the same discipline in which the credit was granted.* Courses taken on the P/F or S/U grading system are not counted for admission to the College of Veterinary Medicine.

English or Communication (6 hrs.)

English

Composition: 1, Composition; 60, Exposition; 65GH, Honors Exposition; 161 Technical Writing or more advanced courses.

Creative Writing: 50, Creative Writing; 70, Creative Writing or more advanced courses.

Communication

75, Introduction to Speech Communication or more advanced courses.

Mathematics (3 hrs.)

10, College Algebra or more advanced courses.

Chemistry (16 hrs.)

Inorganic Chemistry (8 hrs.): 11, General Chemistry; 12, General Chemistry or more advanced courses.

Organic Chemistry (8 hrs.): 210, Organic Chemistry; 211, Organic Chemistry Laboratory; 212 Organic Chemistry or more advanced courses.

Biochemistry cannot be substituted for organic chemistry.

Physics (5 hrs.)

11, Elementary College Physics or more advanced courses.

Biological Sciences (10 hrs.)

11, Introductory Zoology (5 hrs.);* 12, General Botany (5 hrs.) or more advanced courses OR

21, General Biology (5 hrs.);* 22, General Biology (5 hrs.) or more advanced courses.

Required Biological Science courses must be taken in either the area of biology or zoology.

Social Science and/or Humanities Studies can include courses from history, economics, political science, or geography (except those in cartography, meteorology, and climatology), all fine arts courses, classical and foreign languages, literature, mythology, and philosophy.

Electives—May be taken in any area. Students, again, are encouraged to seek a degree program. This is advised since a great number of students cannot be admitted to the College of Veterinary Medicine. Electives should be

taken so that those courses can apply to the selected degree the candidate wishes to pursue.

**Admissions Guidelines
With Regard to Residency**

Since the UMC College of Veterinary Medicine is a state-supported institution and there are far more applicants each year than can be admitted, it has been necessary to establish the following priorities concerning admission:

1. First preference is extended to residents of Missouri.
2. Second-level consideration is usually extended to applicants from states without schools of veterinary medicine.
3. Third-level consideration is generally granted to applicants from states with schools of veterinary medicine.
4. Out-of-state applicants should establish scholastic records of at least B+ (3.5 on a 4.0=A system) in order to receive serious consideration for admission.

Application Procedure

It is recommended that all UMC students interested in veterinary medicine contact the Office of the Assistant Dean for Student and Alumni Affairs, College of Veterinary Medicine, for advisement during the fall semester preceding the year of application.

Students must enter the College of Veterinary Medicine at the beginning of the fall semester. Application forms must be requested, completed, and submitted not later than *December 31* of the year prior to that in which admission is sought. Students seeking admission should follow this procedure:

1. Request admission forms from the Office of the Assistant Dean for Student and Alumni Affairs, UMC, College of Veterinary Medicine, Columbia, Mo. 65201. Application materials are available September through December 15.
2. Return the completed forms to the Office of the Assistant Dean for Student and Alumni Affairs by December 31.
3. Applicants must take the Veterinary Medical Aptitude Test. Information concerning this test, and a list of dates and places where the test is given is sent with other admission forms.

*This change will be effective for students applying to the College of Veterinary Medicine after August 1, 1980.

All applications are considered by the Committee on Admissions and Scholarship for the College of Veterinary Medicine to determine if students meet the required standards. After initial screening, the remaining applicants are evaluated on the basis of their applications, academic records, veterinary aptitude test scores, personal interviews (when required), experience, and personal references. The committee selects students with as many of the following characteristics as possible: high scholastic ability, reasonable judgment and common sense, moderately wide range of interests, some evidence of leadership ability, pleasing and alert personality, willingness to work for a worthwhile objective, and at least a fair understanding of the scope of veterinary medicine.

Fees and Expenses

	<i>Fees each year</i>
Incidental Fee	\$600
Supplementary Fee, Veterinary Medicine	540
Student Activities Fee	44
	\$1,184

In addition to the above fees, out-of-state students must pay a tuition fee of \$1,200 per year.

All veterinary students are required to have a microscope for their personal use before beginning classes in Veterinary Medicine.

The University reserves the right to change fees at any time.

PROFESSIONAL PROGRAM

The first two years of the professional curriculum are designed to provide the student with a solid foundation in basic medical science. Courses of study include



gross and microscopic anatomy, biochemistry, physiology, microbiology, pathology, pharmacology, parasitology, toxicology, public health, clinical pathology, radiology, clinical medicine and surgery, and anesthesiology.

These courses are taught in the laboratory and lecture format familiar to science students. In some areas the audiotutorial teaching approach is being used to a modest extent.

After successful completion of the second year of the professional program, the student enters a segmented curriculum for the years of clinical training. In this concept of veterinary training the final two years are divided into 11 two-month blocks. Students must successfully complete 7 required blocks for graduation. Each two-month block is a complete instructional unit. Students are given the opportunity to concentrate their studies in an area of special interest while gaining exposure to all aspects of veterinary medicine. The required blocks are food animal medicine and surgery, theriogenology, equine medicine and surgery, small animal medicine, small animal surgery, medical services, and diagnostic pathology/special species medicine.

Students may use free blocks to coordinate with their professional objectives. For example, a student may work with a practicing veterinarian, choose to complete a continuation block, or take vacation time.

Professional Curriculum

- VAP—Veterinary Anatomy-Physiology
- VMS—Veterinary Medicine and Surgery
- VM—Veterinary Microbiology
- VP—Veterinary Pathology
- V—(following course number) courses for veterinary students only.

FIRST YEAR (Instructional Periods 1-5)	<i>Hours</i>
Period 1	
VAP202V—Veterinary Anatomy4
VAP220V—Veterinary Physiology	2.5
VAP224V—Veterinary Physiological Chemistry ..	2.5
Period 2	
VAP202V—Veterinary Anatomy4
VAP220V—Veterinary Physiology	2.5
VAP221V—Veterinary Physiological Chemistry ..	2.5
Period 3	
VAP203V—Veterinary Anatomy6
VAP221V—Veterinary Physiology3

Period 4

VAP203V—Veterinary Anatomy	4
VAP221V—Veterinary Physiology	3
VM 241V—Veterinary Immunology	2

Period 5

VP 231V—General Pathology	3
VM 242AV—Veterinary Bacteriology I	3
VM 245AV—Veterinary Parasitology I	3

SECOND YEAR (Instructional Periods 6-10)

Period 6

VP 232AV—Systemic & Special Pathology I	3
VM 242BV—Veterinary Bacteriology II	2
VM 243V—Veterinary Virology	1.5
VM 245BV—Veterinary Parasitology II	3

Period 7

VAP226V—Veterinary Pharmacology	3
VP 232BV—Veterinary Systemic & Special Pathology II	3
VM 243V—Veterinary Virology	1.5
VM 246V—Introduction to Epidemiology & Infectious Diseases	2

Period 8

VAP227V—Veterinary Pharmacology/ Anesthesiology	3.0
VMS271V—Introduction to Clinical Sciences	3.0
VM247V—Veterinary Clinical Epidemiology & Preventive Medicine	4.0

Period 9

VMS271V—Introduction to Clinical Sciences	4.0
VMS273V—Radiology	2.0
VAP228V—Veterinary Toxicology	3.0

Period 10

VMS272V—Small Animal Surgery	2.5
VMS274V—Small Animal Medicine	2.5
VMS275V—Food Animal Medicine & Surgery	3.5
VMS276V—Lab Animal Medicine	1.5

THIRD AND FOURTH YEARS

VMS251V—Food Animal Medicine & Surgery I	
VMS253V—Small Animal Medicine I	
VMS255V—Equine Medicine and Surgery I	
VMS257V—Small Animal Surgery I	
VMS259V—Theriogenology I	
VMS261V—Medical Services I	
VP263V—Diagnostic Pathology & Special Species Medicine I	

Continuation Blocks (requires special consent)

VMS252V—Food Animal Medicine & Surgery II	
VMS254V—Small Animal Medicine II	
VMS256V—Equine Medicine and Surgery II	
VMS258V—Small Animal Surgery II	
VMS258V—Theriogenology II	
VMS262V—Medical Services II	
VP 264V—Diagnostic Pathology & Special Species Medicine II	
VMS266V—Lab. Animal Med. & Mgt. II*	
VMS268V—Herd Health Mgt. & Nutrition II*	
VM270V—Epidemiology & Community Health*	

†To follow Food Animal Medicine and Surgery and Theriogenology blocks.

*Offered not more than twice each year with minimal enrollment to be determined by instructional faculty and department chairman.

Requirements for Graduation

Students are expected to achieve at least a 1.5 grade point average at the end of their first year in the College of Veterinary Medicine. They are required to have cumulative averages of 2.0 (C) or better in the first two years of the curriculum before they can advance to the third year. In the first two years, courses must be completed in sequence because they are offered only once a year.

In the final two years of the professional program, the student must successfully complete the 7 instructional blocks available in the curriculum for the fulfillment of graduation requirements.

The D.V.M. degree, Doctor of Veterinary Medicine, is awarded after successful completion of the professional program.

DEPARTMENTS

There are four academic departments in the College of Veterinary Medicine. The subject matter areas and faculty are as follows.

Veterinary Anatomy-Physiology

During the first year, students in veterinary medicine study the gross and microscopic anatomy of food-producing animals, companion animals, and selected laboratory animals. They concurrently study normal functions of cells, tissues, organs, and body systems in physiology and physiologic chemistry. The veterinarian's knowledge of anatomy, physiology, and physiologic chemistry provides the basis for understanding disease processes and the recognition and treatment of animal diseases.

First-year veterinary students study anatomy in laboratory exercises in gross anatomic dissection, microscopic examination of cells and tissues, and study of embryologic and neuroanatomic specimens. Laboratories in physiologic chemistry and physiology provide opportunities for the student to observe and

measure activity of animal organs and tissues.

During the second year, students study pharmacology, which includes actions of drugs and factors influencing the responses of animals to drugs. In the study of toxicology, the student studies disease conditions resulting from poisonous materials including plants, agricultural and industrial chemicals, feed additives, and drugs.

During the third and fourth years of the professional curriculum, the departmental faculty participate in instruction concerning nutrient requirements of domestic animals, breeding, and genetics. Applied anatomy is taught as part of the clinical training in physical examination, clinical diagnosis, and surgery.

Graduate Program

This department offers graduate study leading to the degree Master of Science in four disciplines: Veterinary Anatomy, Veterinary Biochemistry and Nutrition, Veterinary Pharmacology, and Veterinary Physiology. Graduate study leading to the Doctor of Philosophy degree can be accomplished in the department under the auspices of various Area Programs. The program of study leading to a graduate degree is individually arranged, and prospective students are encouraged to correspond directly with the Director of Graduate Studies about available opportunities. The *UMC Graduate School Bulletin* contains information regarding graduate offerings and specific program requirements.

The courses of study in veterinary anatomy include gross, microscopic, and ultrastructural levels, comparative neuroanatomy and neurology, embryology and developmental anatomy, and anatomy of laboratory animals. Work for the Ph.D. degree can be accomplished through cooperation with the Department of Anatomy, School of Medicine.

Study and research in biochemistry and nutrition includes such areas as interactions between biochemical nutrition and disease, effects of stress on metabolism and other problems related to

nutritional biochemistry. Work for the Ph.D. degree in biochemistry and nutrition can be accomplished in the department under the authority of the Area Program in Nutrition.

Graduate study in Veterinary Pharmacology provides a basis for the understanding of the fundamental principles of pharmacology. Although neuropharmacology is emphasized, a student may work in other areas of pharmacology. The Ph.D. degree in pharmacology is granted in cooperation with the Department of Pharmacology, School of Medicine.

Graduate students in Veterinary Physiology survey knowledge of normal functions in domestic animals and become familiar with research in the field. Work for the Ph.D. degree in Veterinary Physiology can be accomplished in the department under the auspices of the Area Program in Physiology.

Faculty

Gary A. Van Gelder, D.V.M., Ph.D., Chairman; Prof. Vincent V. St. Omer, D.V.M., Ph.D., Director of Graduate Studies; Assoc. Prof. C. Trenton Boyd, Librarian; Instructor James E. Breazile, D.V.M., Ph.D., Prof. Esther M. Brown, Ph.D., Prof. Homer E. Dale, D.V.M., Ph.D., Prof. Mark Dallman, D.V.M., M.S., Instructor Richard E. Doyle, D.V.M., M.S., Asst. Prof. Charles W. Foley, Ph.D., Prof. Robert C. McClure, D.V.M., Ph.D., Prof. Hermann Meyer, D.V.M., Dr.med.vet., Ph.D., Prof. Gary D. Osweiler, D.V.M., Ph.D., Assoc. Prof. Myron E. Tumbleson, Ph.D., Assoc. Prof. Robert W. Zumwalt, Ph.D., Asst. Prof.

Veterinary Medicine and Surgery

Professional Program

In the clinical years of the professional curriculum, the student is introduced to the art and science of clinical veterinary medicine and surgery. The practical application of the basic principles of medicine and surgery to the diagnosis, prevention, and treatment of disease in all species of animals presents a challenge to the mental and physical resources of the student.

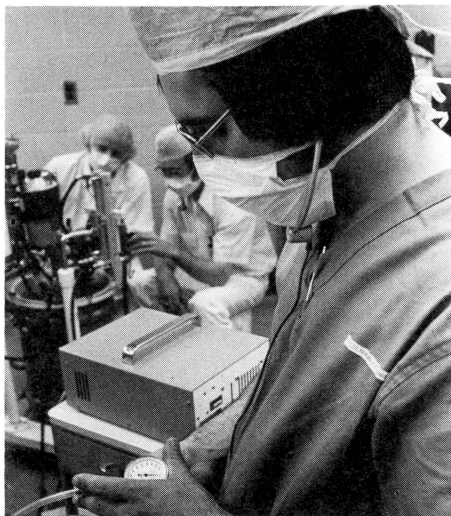
Proficiency in clinical medicine is gained by working closely with experienced clinicians in the small animal, food animal, equine, and ambulatory areas of the Veterinary Medical Teaching Hospital. Through the patient care method of study, professional students are given a considerable amount of responsibility for the total health requirements of animals assigned to their care. Discussion periods, formal lectures, rounds and laboratory training guide the progress of the clinical student in systematic medicine and surgery. A broad exposure to clinical practice is gained by allowances of the curriculum design.

Graduate Program

Programs of excellence exist in the specialty areas of small and large animal surgery, small and large animal medicine, anesthesiology, radiology and nuclear medicine, comparative cardiology, ophthalmology, theriogenology, and toxicology. A separate training and research program in laboratory animal medicine is offered in collaboration with departmental personnel. This program is described in another section of this *Bulletin*.

Completion of the D.V.M. degree (or its approved equivalent) is a prerequisite for admission to the Master of Science degree program. Graduate Records Examination (GRE) and UMC Graduate School acceptance is required of all applicants. A minimum of 30 hours selected from courses receiving graduate credit must be completed for the master's degree. An acceptable thesis based upon original research is required of all degree candidates. All students must be found acceptable by the adviser, the Director of Graduate Studies, and the Department Chairman.

Since the department does not offer the Doctor of Philosophy degree, it is suggested that individuals interested in doctoral research on clinical problems consult and work with faculty members who hold appointments in one of the basic



Monitoring vital signs during surgery.

science areas (anatomy, physiology, microbiology, pathology).

Faculty

- Charles E. Martin, D.V.M., M.S., Chairman; Prof.
- Harold E. Garner, D.V.M., Ph.D., Dir. of Graduate Studies; Assoc. Investigator, Dalton Research Center; Prof.
- James F. Amend, D.V.M., Ph.D., Asst. Prof.
- Robert J. Bahr, D.V.M., Asst. Prof.
- Claudia L. Barton, D.V.M., Asst. Prof.
- Clarence J. Bierschwal, D.V.M., Prof.; Ext. Veterinarian
- M. Joseph Bojrab, D.V.M., Ph.D., Assoc. Prof.
- Roger E. Brown, D.V.M., Ph.D., Prof.
- Joseph M. Carrillo, D.V.M., Asst. Prof.
- Arthur A. Case, D.V.M., Prof.; Ext. Veterinarian
- James R. Coffman, D.V.M., Prof.
- Everette A. Corley, D.V.M., Ph.D., Assoc. Dean; Prof.
- Louis A. Corwin, Jr., D.V.M., Ph.D., Asst. Prof.; Assoc. Prof. (Radiology)
- Arthur W. Dobson, D.V.M., Assoc. Prof.
- Gary A. Eckhoff, D.V.M., Assoc. Prof.
- Ronnie G. Elmore, D.V.M., Asst. Prof.
- Allen W. Hahn, D.V.M., Ph.D., Prof.; Investigator, Dalton Research Center
- Harlan E. Jensen, D.V.M., Ph.D., Assoc. Prof.; Dept. of Ophthalmology, Assoc. Prof.
- Jerry H. Johnson, D.V.M., Assoc. Prof.
- Brent D. Jones, D.V.M., Asst. Prof.
- B. W. Kingrey, D.V.M., Dean Emeritus
- James S. Larsen, D.V.M., Adjunct Assoc. Prof.
- John M. MacDonald, D.V.M., Asst. Prof.
- Joseph T. McGinity, D.V.M., Prof.
- Robert B. Miller, D.V.M., Ph.D., Assoc. Prof.
- Kenneth H. Niemeyer, D.V.M., Asst. Dean; Prof.

John D. Rhoades, D.V.M., Ph.D., Assoc. Prof.;
 Urban Ext. Veterinarian
 Stephen T. Simpson, D.V.M., Asst. Prof.
 Steven G. Stoll, D.V.M., Assoc. Prof.
 James G. Thorne, D.V.M., Assoc. Prof.
 Cynthia M. Trim, B.V.Sc., M.R.C.V.S., D.V.A.,
 Assoc. Prof.
 Louis G. Tritschler, D.V.M., Assoc. Prof.
 Robert S. Youngquist, D.V.M., Asst. Prof.

Residents and Interns

Conrad H. Boulton, D.V.M., Resident Veterinarian
 Ronald L. Burk, D.V.M., Resident Veterinarian
 Erick L. Egger, D.V.M., Resident Veterinarian
 Craig E. Griffin, D.V.M., Intern
 Linda A. Hammond, D.V.M., Resident Veterinarian
 John W. Kaufman, D.V.M., Intern
 Dan W. Knox, D.V.M., Resident Veterinarian
 Wayne R. Renegar, D.V.M., Resident Veterinarian
 Phillip Roudebush, D.V.M., Resident Veterinarian
 Auddie J. Sharp, D.V.M., Resident Veterinarian
 Denis Vaillancourt, D.V.M., Resident Veterinarian
 Robert D. Whitley, D.V.M., Intern
 Stephen R. Wightman, D.V.M., Resident Veterinarian

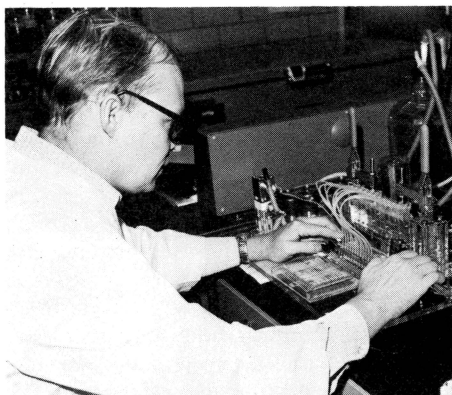
Veterinary Microbiology

Professional Program

Courses offered in the department provide instruction on the host response to invading microorganisms, special properties of pathogenic microorganisms, and techniques for isolation and identification of microorganisms. Special emphasis is placed on the transmission, prevention, and control of infectious and parasitic diseases, and on veterinary community health and immunology. Lectures, organized laboratory periods, special demonstrations, special projects, and autotutorial programs are offered.

Graduate Program

Advanced study leading to the Master of Science in Veterinary Microbiology and the Doctor of Philosophy in the Area of Microbiology is offered. The Master of Science in Public Health (M.S.P.H.) is offered through a joint program with the Department of Family and Community Medicine. The M.S. and Ph.D. programs are designed to prepare students for teaching, research, and diagnostic service in veterinary microbiology, infectious diseases, and the biomedical areas. The M.S.P.H. program prepares students for teaching, research, and administrative positions in Veterinary Community



Basic research on immunology is underway.

Health and Epidemiology. Additional information is provided in the UMC *Graduate School Bulletin* and brochures provided through the departmental office.

Faculty

Raymond W. Loan, D.V.M., Ph.D., Chairman; Prof.
 Hans K. Adllinger, Dr.med.vet., Ph.D., Assoc. Prof.
 John N. Berg, D.V.M., Ph.D., Assoc. Prof.
 Donald C. Blenden, D.V.M., M.S., Prof.; Prof.,
 Family & Community Medicine; Director, Continuing Education
 Olen R. Brown, Ph.D., Prof.; Investigator & Asst. Director, Dalton Research Center
 Gerald M. Buening, D.V.M., Ph.D., Assoc. Prof.
 Anthony W. Confer, D.V.M., M.S., Research Assoc.
 Robert M. Corwin, D.V.M., Ph.D., Assoc. Prof.
 Adrian J. Durant, D.V.M., A.M., Prof. Emeritus
 William H. Fales, Ph.D., Asst. Prof.
 Emmett L. McCune, D.V.M., Ph.D., Prof.
 Harold C. McDougle, D.V.M., A.M., Prof. Emeritus
 Leslie C. Murphy, D.V.M., Prof., Assoc. Dean
 Bruce D. Rosenquist, D.V.M., Ph.D., Prof.
 Charles M. Scanlan, D.V.M., B.S., Research Assoc.
 Lloyd A. Selby, D.V.M., Dr.P.H., Assoc. Prof.; Assoc. Prof., Family & Community Medicine
 Robert F. Solorzano, Ph.D., Assoc. Prof.
 David G. Thawley, B.V.Sc., Ph.D., Asst. Prof.
 Jonathan J. Webber, B.V.Sc., Teaching Assoc.
 James C. Wright, D.V.M., B.S., Instructor

Veterinary Pathology

Professional Program

The primary function of the Department of Veterinary Pathology is to teach professional courses in which instruction is given on the morphologic and biochemical alterations which form the bases for changes that occur in tissues and fluids of diseased animals. The teaching is conducted in formal and applied courses.

The extensive and varied case loads in the Clinical Pathology and Veterinary Diagnostic Laboratory programs are used as teaching resources during the third and fourth years of the professional curriculum.

Graduate Program

The department offers a graduate program leading to the Master of Science degree. For admission, the candidate should have completed the D.V.M., or an acceptable baccalaureate degree. Part I (general aptitude) of the GRE must be taken before entering Graduate School or during the first semester of residence. Students not in the upper third of their class may be admitted on probationary status for one semester. Further details for requirements of the degree are listed in the UMC *Graduate School Bulletin*, or may be obtained on request from the department.

The Ph.D. Area Program in Pathology is jointly staffed and presented by the Departments of Pathology, School of Medicine; Veterinary Pathology, College of Veterinary Medicine; and Plant Pathology, College of Agriculture. Ph.D. candidates may choose their plans of research to take advantage of the interests and specialties of various advisers in the departments. Research is conducted in various areas including morphologic alterations in response to disease, ultrastructural and histochemical changes, clinical chemistry, and immunofluorescence, all of which are related to host-agent interrelationships in the pathogenesis of disease. Included in these studies are food animals, companion animals, research laboratory animals, and some exotic wild animals. A detailed, illustrated brochure on this program is available through the departmental office.

Faculty

Willard H. Eyestone, D.V.M., M.P.H., Ph.D., Chairman; Prof.
John J. Andrews, D.V.M., M.S., Assoc. Prof.
Harry H. Berrier, D.V.M., M.S., Assoc. Prof.
William J. Boever, D.V.M., Adjunct Asst. Prof.
Cecil Elder, D.V.M., M.S., Prof. Emeritus
Robert A. Green, D.V.M., Ph.D., Assoc. Prof.

Aaron H. Groth, D.V.M., M.S., Dean Emeritus; Prof. Emeritus
Raymond L. Hodges, L.L.M., Assoc. Prof. (Forensic Medicine); Assoc. Prof. of Forensic Veterinary Medicine; Assoc. Prof. of Law
Darrell A. Kinden, Ph.D., Asst. Prof.
Ann B. Kier, D.V.M., Research Assoc.
Loren D. Kintner, D.V.M., M.S., Prof.
Marie C. LaRegina, D.V.M., Research Assoc.
Charles C. Middleton, D.V.M., M.S., Prof; Prof. of Family & Community Medicine; Director, Sinclair Research Farm
Robert B. Miller, D.V.M., Ph.D., Assoc. Prof.; Assoc. Prof., Veterinary Medicine & Surgery
Lawrence G. Morehouse, D.V.M., Ph.D., Prof.; Director, Veterinary Medical Diagnostic Laboratory
Bonnard L. Moseley, D.V.M., M.S., Assoc. Prof.; Ext. Veterinarian
Stuart L. Nelson, D.V.M., Ph.D., Prof.
LeRoy D. Olson, D.V.M., Ph.D., Prof.
Donald E. Rodabaugh, D.V.M., M.S., Prof. Emeritus
Donald A. Schmidt, D.V.M., Ph.D., Prof.
Larry P. Thornburg, D.V.M., Ph.D., Asst. Prof.
Joseph E. Wagner, D.V.M., M.P.H., Ph.D., Prof.
Kenneth D. Weide, D.V.M., Ph.D., Dean; Prof.
Fred J. White, M.S., Instructor

VETERINARY MEDICAL DIAGNOSTIC LABORATORY

The Veterinary Medical Diagnostic Laboratory in the College of Veterinary Medicine is interdisciplinary, with responsibility for diagnostic service, teaching, and research. It serves clinicians of the Veterinary Teaching Hospital, veterinary practitioners throughout the state of Missouri, livestock and poultry interests, companion animal interests, wildlife conservationists, scientists utilizing animals in their research throughout the University, and state and federal animal disease regulatory officials. It holds full accreditation from the American Association of Veterinary Laboratory Diagnosticians as a full-service veterinary medical diagnostic laboratory. Previously housed in widely-dispersed locations, it was moved in the spring of 1977 into a new building, placing all aspects of its operations and the total personnel in a single location.

The Diagnostic Laboratory provides an opportunity for veterinary students to receive instruction in diagnostic laboratory medicine. Two blocks of instruction entitled Diagnostic Pathology and Special Species Medicine I and II are offered. Students are assigned to this



area during their clinical years for partial credit, and are under the supervision of staff members. They conduct necropsy examinations and learn interpretation of laboratory tests, e.g., bacteriologic culturing, serological tests, viral isolation, and parasitological and histopathological examinations. One duty station of the Diagnostic Pathology Block is in the Clinical Pathology Laboratories, located in the new Veterinary Medicine Building. Graduate students in pathology and related disciplines receive part of their graduate experience in the Diagnostic Laboratory.

The laboratory is a valuable resource for graduate training through its daily access to disease conditions in more than 60 different animal species. Approximately 15,000 accessions are received by the laboratory annually, including 7,000-8,000 necropsies and a wide variety of disease specimens, for examination by virologists, bacteriologists, serologists, toxicologists, and chemists.

Laboratory staff members have appointments in the academic department of their specialty, and have advanced training in the disciplines of pathology, bacteriology, mycology, virology, parasitology, serology, and toxicology. The staff of the Diagnostic Laboratory also consults with other faculty members of the College and scientists across the UMC campus on a variety of disease problems encountered annually.

Participating Faculty

Lawrence G. Morehouse, D.V.M., Ph.D., Prof.
 H. H. Berrier, D.V.M., M.S., Assoc. Prof., Veterinary Pathology

William H. Fales, Ph.D. Asst. Prof., Veterinary Microbiology
 Loren D. Kintner, D.V.M., M.S., Prof., Veterinary Pathology
 Emmett L. McCune, D.V.M., Ph.D., Prof., Veterinary Microbiology
 Stuart L. Nelson, D.V.M., Ph.D., Prof., Veterinary Pathology
 Gary D. Osweiler, D.V.M., Ph.D., Assoc. Prof., Veterinary Anatomy-Physiology
 Dwight R. Owens, M.S., Microbiologist
 Robert F. Solorzano, Ph.D., Assoc. Prof., Veterinary Microbiology
 Joseph E. Wagner, D.V.M., Prof., Veterinary Pathology
 Robert W. Zumwalt, Ph.D., Asst. Prof., Veterinary Anatomy-Physiology

ADVANCED STUDY

Graduate education and research are integral parts of veterinary medicine. All departments of the college offer advanced training leading to the Master of Science degree. Residency programs are available in medicine and surgery, toxicology, pathology, public health, and laboratory animal medicine. The Departments of Veterinary Anatomy-Physiology, Veterinary Microbiology, and Veterinary Pathology also offer, as part of an area, graduate programs leading to the Doctor of Philosophy degree. Graduate courses are offered in the College of Veterinary Medicine, School of Medicine, College of Arts and Science, College of Agriculture, and in other UMC schools or colleges.

Research programs in the College of Veterinary Medicine have greatly expanded in recent years. This research provides a clearer understanding of disease processes, thereby making possible improved methods of preventing treating diseases of animals and man. Such efforts contribute to the stature of the faculty and the school, and significantly enhance the quality of professional education.

The versatility of the veterinary profession has permitted its members to work in a wide variety of research areas. Some areas being investigated include: infectious and non-infectious diseases of livestock, poultry, and companion animals; zoonoses (diseases transferred from animal to man); reproductive biology; comparative anatomy, physiology,

pharmacology, and pathology; neoplasia; laboratory animal medicine; veterinary public health; environmental health; radiation biology; clinical research and drug evaluation; and nutritional studies. Research projects are supported by federal and state funds, foundation awards, and grants or contracts from industries, livestock producer associations, and other groups.

Graduate Study for Students of Veterinary Medicine

Undergraduate students often find an opportunity to participate actively in research programs. In some cases it is possible to augment training for the D.V.M. degree with study for the Master of Science degree in any of the several areas or departments. The general requirements for advanced degrees are published in the *Graduate School Bulletin*; the specific requirements are established by the various degree-granting entities and are somewhat variable for individual students. Those who are contemplating such a program should recognize that it almost invariably necessitates a one-year interruption of the professional curriculum; they are urged to consult with appropriate faculty about prerequisites and a specific degree program.

Graduate Study for Veterinarians

Many students postpone graduate education until they have received the professional degree. For such individuals with interest in anatomy, microbiology, pathology, or physiology and pharmacology, the M.S. degree is usually part of an integrated program leading to the Ph.D. degree. Further information can be provided by department chairmen.

CONTINUING EDUCATION

The UMC Extension Division is organized to serve the people and institutions of the state. As part of this division, the extension activities in the College of Veterinary Medicine are centered on the activities of the Director of Continuing



Education and other full- and part-time staff veterinarians.

The two principal objectives of Veterinary Medical Continuing Education are continuing professional training for veterinarians and cooperative extension activities. They are interrelated and complementary in that the first serves to increase the professional competence of veterinarians and thereby improve the quality of veterinary medicine offered to clients in the prevention and control of diseases of livestock and pets. The latter acquaints the owners of food producing or companion animals with better utilization of veterinary medical services and with the many advantages of preventing problems before they occur. Rural and urban extension veterinary medicine are an integral part of College programs. Considerable community health consultation is carried out on animal bites and in the risks and occurrence of zoonotic diseases.

Continuing professional education is facilitated by regularly mailed information to more than 950 veterinarians. Conferences, seminars, and short courses also are scheduled for practitioners to participate in intensive learning opportunities. A Mid-Career Program is conducted to give in-depth individualized training in special areas to practicing veterinarians or those veterinarians changing their careers. This consists of a two-month period, with goals mutually agreeable to the participant and instructors involved.

Several means are used to present information on disease problems to animal

owners and allied interest groups. Group meetings of persons interested in a general subject are requested by, or scheduled through, county extension directors. Those in attendance are encouraged to participate in the presentations by asking questions and relating their experiences and problems. Local practicing veterinarians also are invited to attend and participate in these programs.

LABORATORY ANIMAL MEDICINE AREA PROGRAM

Laboratory Animal Medicine is a recognized area of specialization within Veterinary Medicine and, as such, a formal graduate program therein is offered leading to a Master of Science degree. Training includes biology, husbandry, management, surgery, diseases and pathology of laboratory animals on both a formal and residency basis. The study of animal models for human health related research and independent research are also included in the training program. Graduates assume positions in universities, research centers, and institutions conducting biomedical research. The program is designed to prepare trainees for certification by the American College of Laboratory Animal Medicine (ACLAM) and should provide the basis for a career in teaching, research, and professional management of laboratory animal facilities.

Applicants for the Laboratory Animal Medicine Graduate Program must have a Doctor of Veterinary Medicine degree or its equivalent and meet the requirements specified by the Graduate School of UMC. Qualified applicants for the program are selected by the Laboratory Animal Medicine Executive Committee.

PROGRAM

Master of Science Degree

The program follows the guidelines established by the Institute of Laboratory Animal Resources and the American College of Laboratory Animal Medicine.

Completion of the program usually requires three years, depending on the ability and qualifications of the individual student. The first two years include formal courses, assigned problems, residency training, and research. The first two summer sessions and approximately 20 hours each week during the initial two years are devoted to residency training dealing with day-to-day activities in the Department of Laboratory Animal Medicine at the University Medical Center, the Sinclair Comparative Medicine Research Farm, and the Research Animal Diagnostic Laboratory. The third year is devoted primarily to research, preparing a thesis, and continued residency training. Students interested in obtaining a Ph.D. in a basic science may bypass the M.S., if otherwise satisfying the requirements of the program. Trainees are assigned an adviser and are encouraged to select a research area as early in the program as possible.

Courses

Courses may be selected from those offered by the College of Veterinary Medicine, the School of Medicine, and other schools and colleges on the Columbia campus.

Research

The faculty members participating in this program are actively involved in research on animal models of human disease and diseases of laboratory animals.

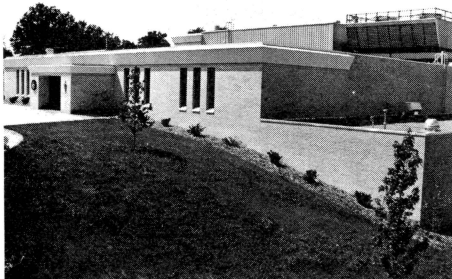
Faculty

Diplomates of the American College of Laboratory Animal Medicine provide leadership in the area of Laboratory Animal Medicine. All hold academic appointments in the College of Veterinary Medicine and some hold joint appointments in the School of Medicine. Other faculty and technical staff of the College of Veterinary Medicine, the School of Medicine, and the Sinclair Comparative Medicine Research Farm assist with the program.

FACILITIES

The UMC College of Veterinary Medicine is divided into the administrative and academic support offices, four academic departments, and a diagnostic laboratory. These units are primarily housed within four buildings in the south-east section of the Columbia campus.

Veterinary Complex—Phase I. This modern structure includes a building designed to house the Veterinary Diagnostic Laboratory and an addition, the Veterinary Medical Teaching Hospital, to house the anatomy section of the Departments of Veterinary Anatomy-Physiology and Veterinary Pathology, the



Veterinary Medicine Building



Connaway Hall

Library, Continuing Education and Extension unit, a portion of the Department of Veterinary Medicine and Surgery, and Administrative and Academic Support offices.

The Veterinary Diagnostic Laboratory houses mammalian and avian necropsy and the Research Animal Diagnostic Laboratory. Supporting laboratory spaces for Toxicology, Histopathology, Serology, Bacteriology, Virology and a large campus incinerator are provided. This modern building is designed to provide the opportunity for veterinary students to receive instruction in diagnostic laboratory medicine.

The addition to the Veterinary Teaching Hospital houses teaching facilities for the Departments of Veterinary Anatomy-Physiology, Veterinary Pathology, and Veterinary Medicine and Surgery. The facilities include a large modern gross anatomy laboratory, two modern, well-equipped classrooms, seminar rooms for small classes, learning centers for individual instruction, three modern surgical suites, anesthesia induction and preparation room, treatment room, hospital space for more than 50 patients, and support space such as an intensive care unit and clinical pathology laboratory.

The facilities for the Veterinary Medical Library have been expanded and are housed in the new addition. This library, a division of Ellis Library, contains more than 23,000 volumes and currently receives more than 550 periodicals. It is open for student use seven days a week. It is designed to serve the veterinary medical and graduate students as well as the teaching and research needs of the College. The Medical Center Library is also available for veterinary student use. Library loans are available from other libraries in the University system. An integral part of the library is two learning centers designed for individual audio-tutorial carrels.

Facilities for a student commons area on the second floor include a food preparation area with dispensing machines, television, and comfortable furniture for student relaxation.

Teaching laboratories are designed to facilitate the use of visual aids and demonstration materials, in addition to providing work and storage space for each student. Students are also assigned individual lockers, providing additional space for coats, books, microscopes and laboratory supplies.

Continuing Education and Extension functions are performed in an office-seminar room unit. This space is designed to facilitate the use of multiple visual aids and demonstrations for both professional and non-professional continuing education activities. This unit also houses a television studio, with the potential of providing closed-circuit productions.

The administrative offices include those of the Dean, Associate Deans, Assistant Dean of Student and Alumni Affairs, and the Assistant to the Dean. This space also houses student, faculty, and alumni records, and the College Fiscal Office.

Graduate student offices and research laboratories, as well as housing for electron microscopes, is provided. This space supports a portion of the College research activities.

Connaway Hall. This structure houses the Department of Veterinary Microbiology and its associated teaching and research programs.

General teaching facilities in Connaway Hall include a large lecture room, two large laboratories equipped for instruction of students in bacteriology, virology, immunology, and parasitology, and an individual learning center.

Laboratory animal housing is scheduled to occupy space vacated by the gross anatomy laboratory.

Veterinary Science Building. This building, last of the temporary structures, provides teaching and research facilities for the physiology-pharmacology section of the Department of Veterinary Anatomy-Physiology. The facilities include a large lecture room, and teaching and research laboratories. Some laboratory animal



facilities for the teaching and research programs are also provided.

A learning center equipped with audio-tutorial material for individual learning experiences is available for student use.

Veterinary Medical Teaching Hospital. The Veterinary Medical Teaching Hospital is the center for teaching clinical medicine. Located in this building are the teaching clinics of the Department of Veterinary Medicine and Surgery. A large amphitheater for clinical conferences and student body functions, specialized laboratories for instruction, and small seminar rooms for the segmented curriculum are a few of the support facilities available.

The Food Animal Clinic specializes in total health care of livestock. Medical, obstetrical, and surgical services are performed in the well-designed hospital. A total of 60 food animals can be hospitalized in the facility.

The Ambulatory Clinic provides individual and herd health professional veterinary services for area livestock farmers. Operating with fully-equipped radio-dispatch-vehicles, clinicians and students make farm calls to provide veterinary care and herd management consultation.

The Companion Animal Clinic provides diagnostic, medical, and surgical treatment for local pet animals and for those referred by practicing veterinarians. Hospitalization facilities are available for over 100 companion animal patients.

Middlebush Farm. The 288-acre farm south of Columbia houses the Equine Center and Orthopedic Foundation for Animals. The farm, a divisional resource, is under development to meet needs of the College.



The Equine Center is the home of instructional courses in equine medicine and surgery for professional students. Medical, obstetrical, and surgical services are provided for local patients and those referred by practicing veterinarians. Space is provided for sophisticated research projects.

Veterinary Medical Research Farm. This 90-acre farm, owned by the College of Veterinary Medicine, is located within a 10-minute drive of the Columbia campus. It has a large barn with three wings for housing large animals, a central research laboratory building, a laboratory for germ-free and animal experiments, a building for housing small animals, and many buildings, large and small, used for various veterinary medical research projects.

RELATED FACILITIES

UMC is one of the few universities in which a college of veterinary medicine and a school of medicine are located on the same campus with a college of agriculture, arts and science, and engineering. A number of interdisciplinary programs within the University permit the sharing of additional facilities by the College of Veterinary Medicine.

Sinclair Research Farm. This 560-acre farm is officially designated by the University of Missouri as the "Charles and Josie Sinclair Research Farm for Studies in Aging and Chronic Diseases." It is located about four miles southwest of the Columbia campus. Several species of animals, including miniature swine, primates, and epileptic cattle, are maintained at the Farm as research subjects.

Projects to investigate chronic disease or aging may utilize laboratories and/or animals at the facility.

Low-Level Radiation Laboratory. This laboratory contains a low-level, whole-body radiation counter. It is designed to measure natural and induced radioactivity in animals and humans. Several research projects in the College of Veterinary Medicine are utilizing this facility.

Dalton Research Center. This facility provides 60,000 square feet of general laboratories, shop, offices, and a specialized branch of Ellis Library. Interdisciplinary projects to increase our knowledge of environmental adaptation of animal species will be coordinated by the Center.

Nuclear Reactor Research Facility. One of the most powerful university nuclear reactors in the United States is in Research Park near the Memorial Stadium. The College of Veterinary Medicine has access to this facility for conducting radiobiological experiments.

Library. Ellis Library, one of the largest university libraries in the United States, houses more than 1,800,000 volumes and 20,000 current periodicals in the main and branch libraries. The College of Veterinary Medicine has its own branch, and students may also use the library at the Medical Center.

Missouri Agricultural Experiment Station. This organization coordinates certain research activities in the School of Forestry, Fisheries and Wildlife; College of Home Economics; and College of Veterinary Medicine, as well as the College of Agriculture.

Computing Activities. This facility has developed necessary computing facilities to assist both the educational and research programs of all divisions at UMC.

STUDENT ACTIVITIES

Code of Ethics (Honor Code)

Honesty is an essential part of professionalism. The "Code of Ethics" at the UMC College of Veterinary Medicine places the responsibility for honor and honesty on the student; therefore, examinations are not closely proctored by faculty members. The expensive drugs and equipment used in clinics and laboratories are made available for most effective instruction, with the understanding that the candidate for the D.V.M. degree will

use these materials only for their intended purposes without being policed by faculty members.

This Code applies to all students in the College of Veterinary Medicine and helps promote ethical standards of personal and professional conduct among the students. Reported violations of this Code are carefully investigated by the Student Honor Committee and every precaution is taken to arrive at just decision. A student found guilty of violating the Code may be dismissed from the college. *Anyone unwilling to accept the responsibility for maintaining the Code* should not apply for admission to the College of Veterinary Medicine.

Student Chapter of the American Veterinary Medical Association. All veterinary medical students are eligible for membership in the Missouri Student Chapter of AVMA. A guest speaker is usually featured at monthly meetings after the transaction of chapter business. Other activities include a picnic given by the second-year class to welcome the incoming class, a smoker at which new students and faculty members are welcomed by the other three classes, an all-school dance in the fall, and an annual Junior-Senior Banquet and Dance in the spring.

The Student Chapter is a divisional arm of Missouri Student Government and functions as the Veterinary Student Council. The official journal for the organization is the *Missouri Veterinarian*, published three times a year. The Chapter



Students perform intravenous administration of fluids.

sends delegates to the national convention, offers support for members to attend national educational symposiums, and provides numerous benefits for new D.V.M.'s upon graduation.

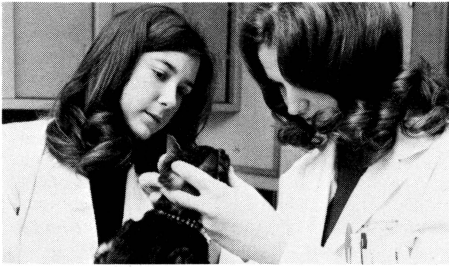
Student AVMA Officers. Members of the Student Chapter of the AVMA elect a president, vice-president, secretary, and treasurer who, along with several officers of each class, make up the Executive Council. Committees for the student chapter of the AVMA are appointed by the president.

Student Honor Committee. As set forth in the preamble to the College of Veterinary Medicine Honor Code, the students of the College have established a code deserving of the high trust and irreproachable conduct demanded by their chosen profession. The Honor Committee is composed of two members from each class. With approval of the Student Chapter of the AVMA, the president appoints the members. The committee is chaired by a fourth-year member.

Class Officers. Each class elects its own officers annually—a president, vice-president, secretary-treasurer, and a class representative. The president of each class and the AVMA Student Chapter President serve on the Student Advisory Council which meets regularly with the Dean and Assistant Dean for Student and Alumni Affairs to discuss matters pertaining to the College.

The Missouri Veterinarian. This is a student-published journal, with a state-wide circulation to veterinarians within Missouri in addition to the College of Veterinary Medicine faculty, students, and alumni. Articles in the journal are directed to veterinary medical practice.

All students interested in assisting with this publication are invited to join the staff to help with reporting, editing, assembling, or circulation. Editors and business, advertising, and circulation managers are selected on their previous experience with the journal, along with their ability and dedication to the profession.



Student Auxiliary. Spouses of students who are members of the Student Chapter of the AVMA are eligible to join this auxiliary organization. Monthly meetings are held with a variety of programs: guest speakers on subjects related to the veterinary profession, homemaking, fashion, business, and many others. Spouses of faculty members serve as sponsors of the group.

Pre-Veterinary Medicine Club. Students on the Columbia campus engaged in pre-veterinary medical study qualify to join this club. A faculty member of the College of Veterinary Medicine acts as adviser. Regular meetings are held, with speakers discussing various aspects of the profession. One objective of the club is to bring about a closer fellowship among students who have a common interest in seeking admission to the College of Veterinary Medicine.

Other Campus Activities. All UMC students are members of the Missouri Students Association and have a voice in campus affairs. They are offered opportunities to fulfill their responsibilities to the student community through participation in a system of student self-government, with emphasis at the divisional level. There are social fraternities and sororities with national affiliation on campus.

HONOR SOCIETIES

Phi Zeta. This is a scholastic honorary society to which third- and fourth-year veterinary medical students may be elected.

Gamma Sigma Delta. This national organization recognizes members of the Colleges of Agriculture, Veterinary Medicine, and Home Economics, and the School of Forestry, Fisheries and Wildlife who have shown exceptional ability during undergraduate or graduate work and of those alumni and faculty

members who have rendered signal service to the cause of agricultural development.

Senior Honor Societies. Mortar Board, Mystical Seven, Omicron Delta Kappa, LSV, QEBH, and Pi Omicron Sigma are senior organizations that recognize leadership and service in addition to scholastic achievement.

AIDS AND AWARDS

UMC has numerous scholarship and loan funds, described in detail in the *Scholarships, Aids and Awards Bulletin*. Additional information on these funds is also available from the Director of Student Financial Aids, 11 Jesse Hall, or the Assistant Dean for Student and Alumni Affairs, College of Veterinary Medicine.

SCHOLARSHIPS

The Alpo Scholarship. Each year the Allen Products Co. presents a four-year scholarship (\$1,000 per year) to one first-year student. The recipient is chosen by the Admissions and Scholarship Committee.

Curators Scholars in Veterinary Medicine. These awards for students entering their first year of veterinary medicine are made on the basis of scholarship and financial need, and cover the incidental and special fees for Missouri residents during the first year. The recipients are chosen by the Admissions and Scholarship Committee.

Pfizer Scholarship. A \$400 award for scholarship and leadership is given to a third-year veterinary medical student to defray part of the expenses of the fourth year while completing requirements for the D.V.M. degree. This scholarship is by application, and the recipient is selected by the Scholarships and Awards Committee.

Frank Wells Scholarship in Veterinary Medicine. The estate of Nellie F. Wells established this scholarship in memory of her brother's continuing interest in the Veterinary College. Interest from the principal is used to provide scholarships for VM-IV students in the professional curriculum in veterinary medicine. Applications can be obtained in the Office of the Assistant Dean for Student and Alumni Affairs. The Scholarships and Awards Committee selects recipients.

LOANS

Students enrolling in the College of Veterinary Medicine should be financially solvent during the first year. They should establish themselves as professional students before applying for money from the funds available to veterinary medical students.

Health Professions Student Loan Program. This loan was made available through the enactment of the Veterinary Medicine Education Act of 1966. To qualify for this program the applicant must be (1) a citizen of the United States, (2) a full-time

student, (3) engaged in pursuing a course of study leading to a D.V.M. degree, and (4) in good standing and capable of maintaining such standing.

Federally Insured Loan Program. A student may arrange a loan of reasonable size with a hometown bank, or other eligible lender and the note is endorsed by the federal government. Thus the student need not provide collateral and the lender is assured of no losses on student loans.

The Missouri Chapter of the AVMA Memorial Loan Fund. Established in 1954, this fund was formerly called the Boyer-Matthews Memorial Fund in memory of two students who died during their final year in school. Additional contributions to the fund have been made in memory of Marlyn Rhoades, deceased wife of a student in the College; and by the family and friends of David L. Rosner, deceased son of Dr. and Mrs. L. A. Rosner. Dr. Rosner served as Missouri State Veterinarian for 12 years.

B. B. Roseboom Memorial Student Loan Fund. This fund was established in 1957 by the Student Chapter of the AVMA in memory of the late B. B. Roseboom, professor of veterinary physiology.

Stanley N. Smith Memorial Fund. Family, friends, and associates of Dr. Smith established this fund to commemorate his 58 years of service to the profession, 10 of which were on the faculty of the College.

The College of Veterinary Medical Alumni Association Loan Fund. This fund is maintained by the alumni of the College for third- and fourth-year students.

Women's Auxiliary to the American Veterinary Medical Association Fund. Fourth-year students are given preference for this fund; third-year and graduate students also are considered. The maximum amount of a loan is \$1,000; the interest is two per cent a year, with the principal to be repaid in two years and the remaining due three years from date of issue.

Women's Auxiliary to the Missouri Veterinary Medical Association Loan Fund. Established in 1950, it is the oldest loan fund available to veterinary medical students at UMC. Loans made from this fund are usually short term—six months to a year.

Central Missouri Veterinary Medical Association Loan Fund. This is a short-term, emergency fund available to third- and fourth-year veterinary medical students.

German Shepherd Dog Club of St. Louis Veterinary Student Loan Fund. A loan fund was established by the Club for the benefit of students in the College.

Tri-State Kennel Club Veterinarian Student Aid Fund. This fund provides loans to worthy students in the College who are majoring in small animal medicine and are in need of financial assistance.

AWARDS

Basic Science Department Awards

Anatomy Award. This award of cash and a certificate presented to the first-year student who has demonstrated outstanding proficiency, interest, and ability in anatomy. The recipient is selected by the Department of Veterinary Anatomy-Physiology.

Physiology Award. This award of cash and a certificate, sponsored by the Greater St. Louis Veterinary Medical Association, recognizes an outstanding first-year student for performance in physiology. The recipient is selected by the Department of Veterinary Anatomy-Physiology.

Microbiology Award. This award of cash and a certificate sponsored by Phillips-Roxane, is presented to a second-year student for scholarship proficiency and interest in veterinary microbiology. The recipient is selected by the Department of Veterinary Microbiology.

Cecil Elder Award. This award of cash and a certificate, endowed by Dr. Elder, is presented to a second-year student who has demonstrated exceptional interest and academic capability in veterinary pathology. The recipient is selected by the Department of Veterinary Pathology.

Kalish Award. The parents of Paul Kalish established this award for a first-year student in honor of their son, who died before he could begin his studies in veterinary medicine. The recipient, selected by the Department of Veterinary Anatomy-Physiology, must demonstrate outstanding ability and interest in biochemistry. The award consists of cash and a certificate.

American Animal Hospital Award. This award, a free student affiliate in A.A.H.A. for the third year of the professional curriculum, is given to a sophomore student who has shown academic achievement. The recipient is selected by the Scholarships and Awards Committee.

Clinic Proficiency Awards

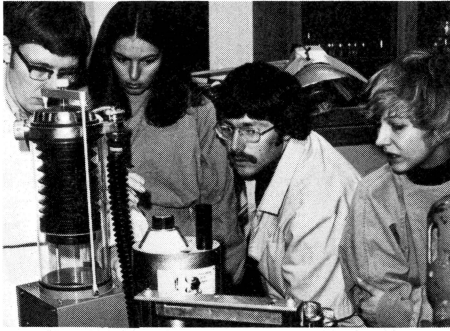
Dr. Edgar Ebert Memorial Awards. The Ebert Fund, established by Mrs. Edgar Ebert with contributions from faculty, alumni, and friends, provides awards of cash and a certificate for two fourth-year students who have demonstrated outstanding ability, one in large animal medicine and one in small animal medicine. The recipients are selected by the Department of Veterinary Medicine and Surgery.

English Practitioner Award. Dr. and Mrs. James E. English established this award of cash and a plaque for the fourth-year student most likely to succeed in general practice, because of overall proficiency in large and small animal veterinary medicine and surgery. The recipient is selected on ballot by classmates.

Veterinary Medicine Journal Awards. The late Dr. Robert L. Anderes, editor of *Veterinary Medicine*,



Students check the progress of the animals daily, in this case a cow with an injured hoof.



Students learn the finer points of veterinary anesthesiology.

established awards (cash and certificates) for two fourth-year students who have demonstrated the most improvement in large and small animal clinical medicine. The recipients are selected by the Department of Veterinary Medicine and Surgery.

Columbia Kennel Club Award. An award of cash and a certificate is presented to a fourth-year veterinary student for outstanding ability and scholastic proficiency in small animal surgery. The recipient is selected by the Department of Veterinary Medicine and Surgery.

American Animal Hospital Award. This award of a plaque and a certificate is presented to a fourth year student for proficiency in small animal medicine and surgery, as judged by the small animal medicine and surgery faculty.

Harlan E. Jensen Ophthalmology Award. This award of cash and a certificate is presented to a fourth-year student who, during the clinical years, has demonstrated outstanding proficiency and interest in ophthalmology. The recipient is selected by Dr. Harlan E. Jensen.

The Elsie Roth Equine Proficiency Award. This award of cash and a certificate is presented to either a third- or fourth-year student who, in the judgment of the faculty, has demonstrated superior competency as a student, and exhibits outstanding future potential in the area of equine medicine and surgery. The recipients are selected by the Department of Veterinary Medicine and Surgery.

Scholastic Awards

Phi Zeta Award. This award of cash and a certificate is presented to the second-year student who has attained the highest scholastic record for the first three semesters of professional veterinary medical curriculum.

The Gamma Sigma Delta Award. The society annually honors a fourth-year student who has demonstrated high academic and extracurricular achievement. The student's name is inscribed on a permanent plaque which hangs in the Veterinary Medicine Library.

Merck Awards. Merck and Company presents Merck Veterinary Manuals to two students, one from the third-year class and one from the fourth-year class, who have attained high scholastic averages.

Diamond Student Research Award. In honor of Dean Emeritus A. H. Groth, Diamond Laboratories established this award to recognize the third-year student who has demonstrated outstanding interest and

achievement in veterinary medical research during the first three years of professional study. The award consists of cash and a certificate. The veterinary medicine faculty is asked to submit nominees from the VM-III class for consideration. Each nomination must include a brief description of the research work in which the student has been involved. The recipient is selected by the Scholarships and Awards Committee.

Arkansas Veterinary Medical Association Award. This award is presented to a fourth-year student who is a resident of the state of Arkansas, has attained at least a G.P.A. of 3.0 and has been active in extracurricular activities in the College of Veterinary Medicine. The recipient is selected by the Scholarships and Awards Committee.

Service Awards

West Central VMA Leadership Award. An award of cash and a plaque is presented to a first-year student who is active in the promotion of organized veterinary medicine. The recipient is selected by classmates.

Auxiliary to the AVMA Award. An award of cash and a certificate is presented to a fourth-year student who has contributed the most to advance the prestige of the College of Veterinary Medicine on the Columbia Campus. The recipient is selected by the VM-IV class.

Missouri Veterinarian Award. An award of a gift is presented to the most outstanding student serving on the publication staff of the *Missouri Veterinarian*. The recipient is selected by SAVMA.

Peristalsis Award. This award of a gift, supported by the Student Chapter of the AVMA, is in recognition of outstanding efforts in the publication of the annual yearbook. The recipient is selected by SAVMA.

Career Day Awards. First-, second-, and third-place awards of cash are presented to recognize various groups who prepare displays for Career Day. Criteria for judging are based on originality, audience appeal, and professionalism. The recipients are selected by the President of the Student Wives Auxiliary, a local practitioner, and a faculty sponsor of student wives.

STUDENT EMPLOYMENT

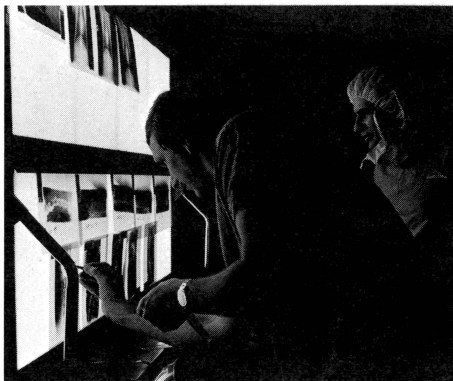
Many students work part time while attending school. Because of the high number of classroom and laboratory hours required of veterinary medical students, it is recommended that outside work be kept at a minimum, especially during the first year.

Some students are employed on research projects, in laboratories, and in clinics. Other students find employment for board, or room and board. The Student Employment Office, a division of the Office of Student Financial Aids, 11 Jesse Hall, provides information and assistance to students seeking part-time work.

STATEMENT OF COURSES

Veterinary Anatomy-Physiology

- 200 PROBLEMS (cr. arr.)
- 202V VETERINARY ANATOMY (8).
- 203V VETERINARY ANATOMY (10). Continuation of 202V.
- 219 ELEMENTS OF VETERINARY ANATOMY (3). Prerequisite: 5 hours biological sciences (zoology) or equivalent.
- 220V VETERINARY PHYSIOLOGY (5).
- 221V VETERINARY PHYSIOLOGY (6). Continuation of 220V.
- 222 FUNDAMENTALS OF ANIMAL PHYSIOLOGY (3). For students not enrolled in the professional Veterinary Medicine curriculum.
- 224V VETERINARY PHYSIOLOGICAL CHEMISTRY (5).
- 226V VETERINARY PHARMACOLOGY (3).
- 227V VETERINARY PHARMACOLOGY/ANESTHESIOLOGY (3).
- 228V VETERINARY TOXICOLOGY (3).
- 300 PROBLEMS (cr. arr.)
- 303 CYTOLOGY, HISTOLOGY AND MICROSCOPIC ANATOMY OF DOMESTIC ANIMALS (5). Prerequisite: graduate standing, background in biological sciences, instructor's consent.
- 305 HISTORICAL AND ANATOMICAL TECHNIQUES (cr. arr.) Prerequisite: background in chemistry and anatomy; instructor's consent.
- 307 EMBRYOLOGY AND DEVELOPMENT OF DOMESTIC ANIMALS (2). Prerequisite: background in biological science & departmental consent.
- 311 CANINE DISSECTION (6). Prerequisite: background in biological science & departmental consent.
- 326 VETERINARY PHARMACOLOGY (3).
- 327 PRINCIPLES OF PHYSIOLOGIC ADAPTATION (3). Prerequisite: vertebrate physiology or physiological zoology, 4 credits; chemistry, 5 credits; or instructor's consent.
- 328 ADAPTATION TO XENOBIOTICS (3). Prerequisite: biochemistry or instructor's consent.
- 400 PROBLEMS (cr. arr.)
- 409 ADVANCED MICROSCOPIC ANATOMY (cr. arr.) Prerequisite: graduate standing, 303 or equivalent, instructor's consent.
- 410 SEMINAR (1). Prerequisite: departmental consent.
- 418 CORRELATIVE NEUROANATOMY (4). Prerequisite: graduate standing and/or instructor's consent.
- 420 VETERINARY PHYSIOLOGY (5). Prerequisite: Biochemistry 270 & Biochemistry 272 or equivalent.
- 421 VETERINARY PHYSIOLOGY (5). Continuation of 420.



427 FATE OF DRUGS IN THE ANIMAL BODY (2) (same as Pharmacology 427). Prerequisite: 10 hours physiology, 5 hours pharmacology & 5 hours biochemistry. alt. w. odd yrs.

450 RESEARCH (cr. arr)

490 RESEARCH (cr. arr.)

Veterinary Medicine and Surgery

Courses:

Departmental course listings include the professional and graduate courses. The graduate student may select from this listing, from other departments in the College of Veterinary Medicine, the School of Medicine, and other schools and colleges at University of Missouri-Columbia. Course selection to insure adequate support for the research and to provide a well-rounded program of study are commanded. Graduate courses require departmental consent.

200V PROBLEMS (cr. arr.).

251V FOOD ANIMAL MEDICINE AND SURGERY I (10).

252V FOOD ANIMAL MEDICINE AND SURGERY II (1-10). Prerequisite: 251V.

253V SMALL ANIMAL MEDICINE I (10).

254V SMALL ANIMAL MEDICINE II (1-10). Prerequisite: 253V or equivalent.

255V EQUINE MEDICINE AND SURGERY I (10).

256V EQUINE MEDICINE AND SURGERY II (1-10). Continuation of 255V.

257V SMALL ANIMAL SURGERY I (10).

258V SMALL ANIMAL SURGERY II (1-10). Prerequisite: 257V or equivalent.

259V THERIOGENOLOGY I (10).

260V THERIOGENOLOGY II (1-10). Continuation of the prerequisite 259V.

261V MEDICAL SERVICES I (10).

262V MEDICAL SERVICES II (1-10). Continuation of the prerequisite 261V.

265V LABORATORY ANIMAL MEDICINE AND MANAGEMENT I (10).

266V LABORATORY ANIMAL MEDICINE AND MANAGEMENT II (1-10).

267V HERD HEALTH MANAGEMENT AND NUTRITION I (1-10).

268V HERD HEALTH MANAGEMENT AND NUTRITION II (1-10). Prerequisite: 251V & 259V.

271V INTRODUCTION TO CLINICAL SCIENCES (7).

272V SMALL ANIMAL SURGERY (2½).

273V RADIOLOGY (2).

274V SMALL ANIMAL MEDICINE (2½).

275V FOOD ANIMAL MEDICINE AND SURGERY (3½).

276V LABORATORY ANIMAL MEDICINE (1½).

300 PROBLEMS (cr. arr.)

328 INTRODUCTORY RADIATION BIOLOGY (3) (same as Nuclear Engineering 328, Radiology 328, Biological Sciences 328). Prerequisite: junior standing sciences/engineering; one course in biological sciences & physics/chemistry; or instructor's consent.

351 ADVANCED SURGICAL TECHNIQUES (cr. arr.) Prerequisite: D.V.M.

355 ADVANCED TECHNIQUES IN RADIOLOGY (cr. arr.) Prerequisite: D.V.M.

356 ADVANCED STUDIES OF POISONOUS PLANTS AND TOXICOLOGY (cr. arr.) Prerequisite: D.V.M.

400 PROBLEMS (cr. arr.)

410 SEMINAR (1).

450 RESEARCH (cr. arr.)

458 FACILITATIVE SURGERY (3) (same as Laboratory Animal Medicine Area 458). Prerequisite: departmental consent. alt. w. odd yrs.

468 LABORATORY ANIMAL BIOLOGY (3) (same as Laboratory Animal Medicine Area 468). Prerequisite: departmental consent. alt. f. even yrs.

469 LABORATORY ANIMAL COLONY MANAGEMENT (3) (same as Laboratory Animal Medicine Area 469). Prerequisite: departmental consent. alt. f. odd yrs.

475 METHODOLOGY OF ANIMAL EXPERIMENTATION (1) (same as Laboratory Animal Medicine Area 475). Prerequisite: departmental consent. alt. w. odd yrs.

487 NUCLEAR MEDICINE (3). Prerequisite: one year college physics, D.V.M. degree & departmental consent.

488 RADIATION THERAPY (3). Prerequisite: one year college physics, D.V.M. degree & departmental consent.

490 RESEARCH (cr. arr.)

Veterinary Microbiology

241V VETERINARY IMMUNOLOGY (2). Instructional Period 4.

242AV VETERINARY BACTERIOLOGY I (3). Instructional Period 5. Prerequisite: enrollment in the College of Veterinary Medicine.

242BV VETERINARY BACTERIOLOGY II (2). Continuation of 242AV. Prerequisite: same as 242AV. Instructional Period 6.

243V VETERINARY VIROLOGY (3). Instructional Periods 6 and 7.

245AV VETERINARY PARASITOLOGY I (3). Prerequisite: enrollment in the College of Veterinary Medicine. Instructional Period 5.

245BV VETERINARY PARASITOLOGY II (3). Continuation of 245AV. Prerequisite: same as 245AV. Instructional Period 6.

246V INTRODUCTION TO EPIDEMIOLOGY AND INFECTIOUS DISEASE (2). Instructional Period 7.

247V VETERINARY CLINICAL EPIDEMIOLOGY AND PREVENTIVE MEDICINE (4). Instructional Period 8.

269V PUBLIC HEALTH AND EPIDEMOLOGY (10). Offered two or three times yearly. Not offered after 1978-79.

270V EPIDEMIOLOGY AND COMMUNITY HEALTH (1-10). Prerequisite: 247V or instructor's consent. Instructional Period arranged.

300 PROBLEMS (cr. arr.)



340 MICROBIAL PHYSIOLOGY (3). Prerequisite: one course in microbiology & one in general biochemistry. alt. f. odd yrs.

343 CONCEPTS AND METHODS IN ANIMAL VIROLOGY (3). Prerequisite: general microbiology, general biochemistry & instructor's consent. alt. f. odd yrs.

345 VETERINARY PARASITOLOGY I (3). Presented concurrently with 245AV. Instructional period 5. Prerequisite: Biological Sciences 210 or equivalent & instructor's consent.

346 VETERINARY PARASITOLOGY II (3). Continuation of 345. Also concurrent with 245BV. Instructional period 6. Prerequisite: Biological Sciences 210 or equivalent & instructor's consent.

347 CLINICAL EPIDEMIOLOGY AND ENVIRONMENTAL HEALTH (1-10). Prerequisite: enrollment in a professional medical, dental, or public health curriculum.

348 EPIDEMIOLOGY OF ZONOTIC DISEASES (1-10). Prerequisite: enrollment in a professional medical, dental, or public health curriculum.

410 SEMINAR (1).

441 TOPICS IN VETERINARY MICROBIOLOGY (1-3). Prerequisite: graduate standing & instructor's consent.

442 ADVANCED VETERINARY MICROBIOLOGY (3). Prerequisite: graduate standing & instructor's consent.

443 VIRAL INFECTION AND IMMUNITY (3). Prerequisite: graduate standing & instructor's consent. alt. w. even yrs.

444 DISEASES OF LABORATORY ANIMALS (3) (same as Laboratory Animal Medicine Area 444). alt. w. even yrs.

445 ADVANCED VETERINARY PARASITOLOGY (3). Prerequisite: one course in general parasitology & graduate standing. alt. w. odd yrs.

447 ONCOGENIC ANIMAL VIRUSES (3). Prerequisite: general microbiology, virology, general biochemistry, & instructor's consent alt. f. even yrs.

449 EPIDEMIOLOGY OF ZOOSES (3) (same as Family & Community Medicine 449). Prerequisite: epidemiology & medical microbiology or instructor's consent. alt. f. odd yrs.

490 RESEARCH (cr. arr.)

Veterinary Pathology

200 PROBLEMS (cr. arr.)

230 ANIMAL SANITATION AND DISEASE PREVENTION (3). Prerequisite: Veterinary Anatomy-Physiology 219 or Veterinary Anatomy-Physiology 222.

231V GENERAL Pathology (3). f.

232AV SYSTEMIC AND SPECIAL PATHOLOGY I (3).w.

232BV SYSTEMIC AND SPECIAL PATHOLOGY II (3). Continuation of 232AV.

263V DIAGNOSTIC PATHOLOGY AND SPECIAL SPECIES MEDICINE I (10). Offered six times yearly.

264V DIAGNOSTIC PATHOLOGY AND SPECIAL SPECIES MEDICINE II (1-10). Prerequisite: 263V or equivalent.

300 PROBLEMS (cr. arr.) Prerequisite: D.V.M. & departmental consent.

335 TECHNIQUES IN PATHOLOGY (cr. arr.)

410 SEMINAR (1). f,w.

430 COMPARATIVE PATHOLOGY (3) (same as Plant Pathology 430, Pathology 430).

431 ADVANCED VETERINARY PATHOLOGY (3-5). Prerequisite: departmental consent.

432 ADVANCED HISTOPATHOLOGY (5). Prerequisite: departmental consent.

433 VETERINARY ONCOLOGY (3). Prerequisite: departmental consent.

434 ADVANCED CLINICAL PATHOLOGY (4). Prerequisite: departmental consent. alt. f. even yrs.

437 PATHOLOGY OF LABORATORY ANIMALS (3) (same as Laboratory Animal Medicine Area 437). Prerequisite: departmental consent. alt. w. even yrs.

438 PRIMATOLOGY (3) (same as Laboratory Animal Medicine Area 438). Prerequisite: departmental consent. alt. f. even yrs.

450 RESEARCH (cr. arr.)

490 RESEARCH (cr. arr.)

UNIVERSITY OF MISSOURI SYSTEM

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JIM C. POGUE (*Interim*), *Rolla Campus*

ARNOLD B. GROBMAN, *St. Louis Campus*

The University of Missouri is one university with four campuses—Columbia, Kansas City, Rolla, and St. Louis. Established in 1839 at Columbia (oldest and largest of the four campuses), the University is recognized as the first state university west of the Mississippi River. Designated a land-grant university in 1870, it has extended its educational benefits to all sections of the State of Missouri in addition to its traditionally assigned tasks of teaching and research within the campus settings.

The University is governed by a Board of Curators. The President of the University and his staff coordinate programs of all four campuses. The Chancellors are the chief academic and administrative officers for their respective campuses.

All statements in this publication are announcements of present policies only and are subject to change at any time without prior notice. They are not to be regarded as offers to contract.



UNIVERSITY OF MISSOURI-COLUMBIA